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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,322	04/22/2004	Martin Klecn	32860-000728/US	5677

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EXAMINER
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AZARIAN, SEYED H

ART UNIT	PAPER NUMBER
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2624

MAIL DATE	DELIVERY MODE
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05/07/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/829,322	<b>Applicant(s)</b> MARTIN KLEEN	
	<b>Examiner</b> Seyed Azarian	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 8, 11-16, 18, 19 and 24-31 is/are rejected.
- 7) ☒ Claim(s) 6, 9, 10, 17 and 20-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/22/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Claim Rejections - 35 USC § 103**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7-8, 11-16, 18-19, and 24-31, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi et al (U.S. patent 6,918,872) in view of Johnson et al (U.S. patent 6,928,314).

Regarding claim 1, Yokoi discloses a computer-assisted 3D imaging method for a wireless, capsule-type endoscope unit equipped with a video camera, comprising (column 2, lines 17-23, Fig. 1(A) and 1(B), computer shows a capsule endoscope system);

recording images of surroundings of the endoscope unit (column 2, lines 24-30, image detection and viewing the capsule endoscope);

transmitting image data of the recorded images, in a wireless fashion, from the endoscope unit to at least one of a reception device and evaluation device (column 6, line 66 through column 7, line 12, wirelessly transmitting image data);

substantially corresponding image features in order thereby to produce a pseudo three-dimensional representation of the surroundings of the endoscope unit (column 3, lines 12-22, providing images for 3-D viewing).

However regarding claim 1, Yokoi does not explicitly state its corresponding “carrying out an image processing for the concatenation of individual image”. On the other hand Johnson in the same field of medical and human digestive tract teaches (column 20, lines 41-62, to concatenate the acquisitions without attempting to correct for overlap. This causes the examinations to be imprecisely registered).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yokoi invention according to the teaching of Johnson because it provides diagnostic information with 3D rendering techniques that allows fast, interactive evaluation for analyzing the digestive tract).

Regarding claim 2, Yokoi discloses the computer-assisted 3D imaging method as claimed in claim 1, wherein, with each i-th recording, the position of the endoscope unit is detected and transmitted together with the image data to the reception and evaluation device and is digitally stored therein, I being a whole number greater than or equal to one (column 3, line 55 through column 4, line 24, viewing the capsule endoscope from object, the positional relationship between the illumination means and imaging means is determined).

Regarding claim 3, Yokoi discloses the computer-assisted 3D imaging method as claimed in claim 1, wherein at least one of the position and orientation of the capsule-type endoscope unit is detected and inserted into the pseudo three-dimensional representation visualized via a display device (column 7, lines 13-20, refer to personal computer and displaying).

Regarding claim 4, Yokoi discloses the computer-assisted 3D imaging method as claimed in claim 1, wherein different camera perspectives of the surroundings of the endoscope unit are displayed by navigating a cursor in a control window of an operator interface, represented on a display device, of a computer program (see claim 3, also column 7, lines 21-44, Fig. 1B, element 5, 13, 14).

Regarding claim 5, Yokoi discloses the computer-assisted 3D imaging method as claimed in claim 4, wherein the navigation is performed by way of input parameters (column 7, lines 13-44, refer to data input).

Regarding claim 8, Yokoi discloses the computer-assisted 3D imaging method as claimed in claim 1, wherein, for concatenation of two individual images (m, n), use is made of the path difference, covered by the capsule-type endoscope unit and loaded with a weighting factor, between the instantaneous recording positions (column 3, lines 12-22, images having different parallax for 3-D viewing are positioned within the capsule, also column 4, lines 41-67).

Regarding claim 11, Yokoi discloses a wireless endoscope unit in the form of a swallowable capsule, comprising an integrated camera for recording a sequence of individual images; a transmitter for wireless transmission of image data of the recorded images to a reception device and evaluation device, and a permanent magnet, provided in the capsule, via which the endoscope unit is actively movable in a wireless fashion upon application of a temporally varying external magnetic field (see claim 1, also column 8, lines 33-54, permanent magnetic).

Regarding claim 14, Yokoi discloses the medical apparatus as claimed in claim 12, further comprising: a distributed arrangement of metal sensors for locating metal parts of the capsule-type endoscope unit; and a measuring sensor, connected to the sensor arrangement, including a transponder as an interface between the sensor arrangement and the computation unit (see claim 1, also column 11, lines 22-47, refer to image sensor).

Regarding claim 16, Yokoi discloses the computer-assisted 3D imaging method as claimed in claim 4, wherein the navigation is performed by way of input parameters including magnitude of an advancing movement in a direction of movement of the capsule-type endoscope unit, and magnitude of rotary movement about an axis pointing in the direction of movement (see claim 1, also column 8, lines 33-54, permanent magnetic).

Regarding claim 18, Yokoi discloses the computer-assisted 3D imaging method as claimed in claim 3, wherein the pseudo three-dimensional representation of the surroundings of the endoscope unit visualized via the display device, is inspectable in the course of a virtual endoscope by varying the viewing perspective with the aid of control signals of an input unit (column 3, line 55 through column 4, line 24, viewing the capsule endoscope from object, the positional relationship between the illumination means and imaging means is determined, also column 7, lines 13-20, refer to personal computer and displaying).

With regard to claims 7, 12-13, 15, 19, the arguments analogous to those

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presented above for claims 1, 3, 9, 18 are respectively applicable to claims 7, 12-13, 15, 19.

With regard to claims 24-27, the arguments analogous to those presented above for claims 1, 8, 9, 10 are respectively applicable to claims 24-27.

With regard to claims 28-31, the arguments analogous to those presented above for claims 1, 8, 11, 16 and 18 are respectively applicable to claims 28-31.

### ***Allowable Subject Matter***

Claims 6, 9-10, 17, 20-23 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### **Other prior art cited**

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(U.S. patent 6,939,292) to Mizuno is cited for capsule type endoscope.

(U.S. patent 6,944,316) to Glukhovsky et al is cited for motility analysis within a gastrointestinal tract.

(U.S. patent 7,138,103) to Goldeberg et al is cited for use of bi-specific antibodies for pre-targeting diagnosis and therapy.

(U.S. patent 6,233,476) to Strommer et al is cited for medical positioning system.

### **Contact Information**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (571) 272-7443. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR.

Status information about the PAIR system, see [http:// pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Seyed Azarian  
Patent Examiner  
Group Art Unit 2624  
April 28, 2007

A handwritten signature in cursive script, appearing to read "Seyed Azarian", is written below the typed name and title.